UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

May 9, 2000

Ref: 8EPR-EP

Martha Ketelle
Forest Supervisor
White River National Forest
900 Grand Avenue
PO Box 948
Glenwood Springs, CO 81602

RE: White River National Forest Plan DEIS
CEQ # 990277

Dear Ms. Ketelle:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA), 42 U.S.C. Section 4321, et. seq., and Section 309 of the Clean Air Act, the Region 8 office of the Environmental Protection Agency (EPA) has reviewed the referenced Draft Environmental Impact Statement (DEIS). In this case, the United States Forest Service (USFS) has chosen to include its Travel Management Plan in the same analysis as the Forest Plan. EPA is providing the following comments on both Plans.

We would first like to express our appreciation to the planning staff at the White River National Forest (WRNF) and to all of the resource experts on the Forest who took time to explain the forest planning process and to answer our many questions. Our review included two in-depth meetings with you and your staff on EPA's preliminary concerns with the planning document. After detailed review and meetings on the DEIS, we found this document to be accessible and understandable, considering the breadth of issues the Plan is required to cover. Generally, in our review of numerous NEPA documents, EPA has noted improvements in the management of the WRNF over the course of the last planning cycle. With the increasing base of information provided through this forest planning effort, we anticipate this trend will continue.

This forest planning effort is both timely and critical. Since the last WRNF Forest Plan was approved in 1984, human populations in the lands surrounding the Forest and on the Front Range of Colorado have expanded dramatically. By most accounts, the rate of growth is expected to continue into the near future. Not surprisingly, recreational use of the Forest has increased in a relatively parallel trend with the growing population. Conversely, the National Forest lands, on which the American public depend for providing clean drinking water, wildlife habitat and recreation opportunities, are not expanding. The USFS has the responsibility to manage and protect natural resources while providing an appropriate range of recreational outlets for the public. Clearly, in this forest planning cycle and the cycles to come, the USFS's responsibility of maintaining the balance between ecological sustainability and increasing recreation demands will become tremendously more difficult to maintain. If the WRNF is to successfully meet this balance, forest users will have to accept some limitations and learn to live with more population density while enjoying the use of these public lands.

With expansion of I-70 traffic capacity, recreation pressures on the Forest and development pressures on surrounding lands will increase even further. It is therefore critical, in this planning cycle, to identify and permanently protect those resources and habitat elements that sustain the ecosystem functions provided by the WRNF.

While EPA recognizes the multiple use mandate on National Forests, our comments on this Forest Plan are mainly targeted to ensure that this Plan results in ecological sustainability while meeting these multiple use objectives. If ecosystem functions are not maintained, many of the resources that draw the public to visit National Forests may become further impaired or lost altogether.

As stated in the Purpose and Need (DEIS, p. 1-5), "The challenge facing the WRNF is to optimize the recreation experience while balancing it with the need to protect wildlife and other environmental values." Based primarily on information provided in this DEIS regarding impacts from growth in recreational use, EPA concludes that the 1984 Forest Plan is not currently providing this balance and, as a result, some ecosystem functions are in jeopardy.

From 1984-6 to 1994-6, off-highway vehicle (OHV) use on the Forest increased by 74% *per year* (DEIS, Table 3-67). From 1984-6 to 1994-6, bicycling on the Forest increased by 214% *per year* (DEIS, Table 3-67). For understandable reasons, the 1984 Plan did not forecast these dramatic increases in motorized and mechanized recreation and the associated impacts that have emerged over the last 15 years. Consequently, the 1984 Plan no longer effectively balances those uses with ecosystem protection. Because the 1984 Plan largely did not adequately direct these uses toward areas where they would cause the least environmental harm, motorized and mechanized use grew across the Forest based almost primarily on user preferences for terrain and based on availability of access. With improved understanding of ecosystem function, the WRNF now has the opportunity to adjust management practices to restore and sustain ecosystem functions.

Given the ever-increasing pressures on resources faced by the Forest, it is critical that the WRNF take every opportunity to improve or recover stressed ecosystem components. For example,

the DEIS indicates that there are a number of impaired stream reaches in the Forest (Appendix J), a significant percentage of the riparian areas on the Forest are not currently in full-functioning condition, and 70% of the roads in the Forest do not meet standards. We support the case made by the USFS in these documents that in this upcoming planning cycle, not only must the WRNF be vigilant to prevent worsening these situations, the Forest must actively work to improve these conditions.

In selecting Alternative D as the preferred alternative, the USFS has indicated, and EPA agrees, that this alternative best restores the balance between recreation and sustainable ecosystem functions as described in the purpose and need. It follows that if the final decision includes more roads, trails and open travel, or more prescriptions with landscape impacts, the USFS decision should balance these negative impacts by designating more lands for protection of ecosystem functions (*e.g.*, wilderness, research natural areas, wildlife corridor and core areas) in order to meet the purpose and need.

EPA has enclosed our detailed comments, concerns, and suggestions for this DEIS. Our comments are organized loosely by document, the first section of detailed comments apply to the DEIS, and the second section of comments apply to the Proposed Revised Land and Resource Management Plan which contains comments on the proposed Goals and Objectives, Standards and Guidelines, the Management Area Descriptions, and the Monitoring Plan. Comments on the Travel Management Plan are included with the DEIS comments. Some of EPA's comments may be applicable to both documents. EPA's major concerns include: 1) the inconsistent disclosure and analysis of impacts from ski-based resorts/aerial transportation corridors, 2) the Travel Management Plan does not adequately disclose the impacts of unplanned or user created roads and trails, and 3) the lack of information in the document on the results of recently completed watershed assessments.

The Ski-Based Resort (DEIS, 3-299) and Aerial Transport Corridor (ATC) (DEIS, 3-351) sections erroneously indicate that Alternatives with the most ski development potential (Alternatives E and F) would result in the least environmental impact. This must be resolved in the Final Environmental Impact Statement (FEIS) to prevent the final decision from being based on analysis biased toward specific alternatives. The NEPA implementing language encourages balanced analysis among all alternatives and discourages weighting analysis in favor of any one alternative. The analysis provided in the Ski-Based Resort and ATC sections is in conflict with the Resource sections of the DEIS (air, water, wildlife, habitat, soil, watershed). The Resource analysis provides a more balanced and accurate assessment of potential effects, properly indicating that the projected impacts to natural resources are proportional to the area designated for ski-based resorts and aerial transport corridors.

While in general, the Travel Management analysis was very complete and helpful, EPA noted a lack of information on the impacts of unplanned or user-created roads and trails (travelways). Because the impacts from unplanned, user-created travelways can far outweigh the impacts from USFS planned and designed travelways, the impacts from unplanned routes should be more specifically disclosed and weighed in making both travel management and resource

management decisions on the WRNF. To better guide these decisions, EPA recommends the Travel Management section in the FEIS include an assessment or projection of the amount of unplanned travelways in each District, the general location of concentrations of unplanned travelways, and a more thorough assessment of the potential impacts of the current network of unplanned travelways. This disclosure is critical because unplanned routes could feasibly result in the USFS's inability to meet goals, objectives, standards and guidelines for certain management areas. Additionally, the WRNF should include in the DEIS an assurance that Executive Order 11644 is being complied with on the WRNF with this Plan.

Our third major concern is that the document does not include any detail on the results of the recently concluded USFS watershed assessment on the WRNF. This information is among the most critical available sources for determining where past practices have been ineffective at protecting ecosystem resources. The assessment can also provide pointers to activities that may be contributing to loss of ecosystem function. EPA recommends that much more specific information be included in the FEIS, and that this information be among the primary drivers for decisions on land management allocations.

It is EPA policy to provide a rating on the USFS preferred alternative, which in this case is Alternative D. For the WRNF Draft Forest and Travel Management Plans, Alternative D receives a rating of **EC-2** (environmental concerns, needs information). In the DEIS, EPA has identified environmental impacts associated with user-created trails, and with expansion of ski area and aerial transport corridor management areas, that should be avoided to fully protect the environment. The DEIS does not provide sufficient analysis or mitigation for protection of wildlife corridors and core areas to meet the purpose and need of maintaining ecosystem function with all alternatives, and does not assess whether the Travel Management Plan complies with Executive Order 11644. A full description of EPA's EIS rating system is enclosed.

Were we to provide a rating for the other action alternatives in the document, Alternative I, although it may even provide more environmental protection than would Alternative D, would also receive an **EC-2** for the same reasons as Alternative D. We would have rated Alternatives C, E and F as **EO-2** (environmental objections, needs information). EO-2 ratings may require significant corrective measures and substantial changes to the alternative or consideration of some other project alternative. Alternatives E and F propose: high impact management area expansions (ski-based resorts and ATCs) into critical wildlife habitats that, in some cases, were specifically set aside in previous WRNF site-specific decisions; more high-impact roads and trails allowed to remain on the Forest in these alternatives, resulting in less likelihood that ecosystem functions could be maintained or recovered; and ski area and ATC management area expansions that would also likely increase the amount of irreversible impact to fragile alpine ecosystems.

We welcome the opportunity to meet with you and your staff to resolve the identified issues and to assist the USFS in any way possible between now and the publication of the Final Environmental Impact Statement (FEIS). Thank you for your willingness to consider our comments at this stage of the

process and we hope they will be useful to you. If you have any questions or concerns regarding these comments and recommendations, please contact Phil Strobel of my staff at (303) 312-6704.

Sincerely,

Original Signed by

Cynthia G. Cody
Chief, NEPA Unit
Ecosystems Protection Program

Enclosures

cc: Mike Claffey, ACOE Grand Junction
Gary Patton, USFWS Lakewood
John Toolen, CDOW Grand Junction

DETAILED COMMENTS ON THE WHITE RIVER FOREST AND TRAVEL PLANS

Part 1
Draft Environmental Impact Statement (DEIS)

I. Special Areas of Concern

A. Alpine Ecosystems

1. EPA is concerned about soil-disturbing activities in alpine tundra or talus. The degree of environmental impact from surface-disturbing activities in alpine tundra and talus cannot be predicted, nor can the effectiveness of mitigation be predicted given the current state of the science. Further, whatever impacts do occur in alpine tundra are, for all practical purposes, irreversible. Therefore, the USFS should avoid disturbing tundra and talus soils from new roads, trails, off-trail summer recreation, utility corridors, graded ski runs, and snow lines and should minimize the footprint of any structures in these areas.

2. Biodiversity and water quality in tundra and talus systems are extremely vulnerable. Soil or vegetation disturbance in these systems can modify hydrology and increase run-off. Because these shallow-soil ecosystems are often tied to their unique hydrology, the impact of a road cut, or other disturbance, can extend well downslope of the disturbed area.

3. Disturbance of vegetation in high altitude and rocky areas can also increase susceptibility to noxious plant invasion. Similarly, an increase in available nutrients can also lead to non-native or noxious species gaining a foothold. For this reason, the use of snow stabilizing chemicals such as ammonium nitrate on ski runs (a common ski-area practice) should not be applied over alpine habitats because the chemicals may act as a fertilizer and disrupt ecosystem function.

4. EPA believes there should be standards or guidelines in the draft Plan that would specifically protect these unique and fragile systems from unnecessary harm. We recommend the USFS include one or more standards in the Final Plan to address this concern. Perhaps the wetlands standard could be used as a starting point for development of an alpine vegetation standard (Plan 2-5).

B. Research Natural Areas and Special Interest Areas

1. EPA supports the Research Natural Areas concept that are emphasized in Alternatives I and D. These areas are key to gaining a better understanding of the critical functions of the Forest so that future planning might be guided by a strong base of information.

II. Travel Management

General Comment: The "Legislative Framework" for the Travel Management Section (DEIS 3-235) should be expanded to include Executive Order (E.O.)11644, as amended by Executive Order 11989, which addresses off-road vehicle use on public lands. E.O. 11644 states that off-highway vehicle "(a)reas and trails shall be located to minimize damage to soil, watershed, vegetation, or other resources of the public lands" and "shall be located to minimize harassment of wildlife or significant disruption of wildlife habitats." The Order further directs land managers to monitor the effects of off-road vehicles, and to amend or rescind designations as necessary to comply with the Order. E.O. 11989 provides for "special protection of the public lands" by adding that the "...respective agency head shall, whenever he determines that the use of off-road vehicles will cause or is causing considerable adverse effects on the soil, vegetation, wildlife, wildlife habitat or cultural or historic resources of particular areas or trails of the public lands, immediately close such areas or trails to the type of off-road vehicle causing such effects..."

A. Wilderness Impacts from Travel Management

1. One of the National Strategic Goals listed in the Land and Management Resource Plan (p. A-5) states, "(e)xclude the sight, sound, and other tangible evidence of motorized equipment or mechanical transport within Wilderness, except where they are needed and justified." Based solely on the Management Area Map provided for Alternative B (no action, current management), there may be a number of areas where this National Strategic Goal is not being met. Site visits to these areas may be required to confirm whether sight, sound or odor from motorized use are tangible from within the wilderness boundary. Some areas that may be monitored include the road to Maroon Lake in the Maroon Bells Wilderness, Independence Pass and Lincoln Creek in the Collegiate Peaks and Hunter Frying Pan Wildernesses, Gold Park and Homestake Creek in the Holy Cross Wilderness, and the road to Trappers Lake in the Flat Tops Wilderness. In many of these areas it may be difficult to conclude that equipment or transport are "needed and justified," except in cases of emergency.

B. Spring/Summer/Fall Travel Management

1. EPA fully supports a move from "open travel" to "restricted or limited travel" on all areas of the Forest for both motorized and mechanized travel during the non-winter period. Under an open travel policy which allows off-travelway or cross-country travel, Federal land management agencies have no way to ensure that Resource Management Plan goals and Forest Plan goals are met including: managing vegetation, improving wildlife habitat and biodiversity, maintaining water quality to standards, conserving soil resources, maintaining long-term land productivity, and providing a safe, efficient and environmentally sound transportation system. These resource management goals are set through open NEPA processes involving public input and thereby assist the Agencies to make decisions that

achieve those goals. Without the ability to direct the location, timing and amount of OHV and other land uses, land managers lack the necessary management tools to meet goals and maintain sustainable ecosystems. Without site-specific analysis, a travel policy limited to designated travelways (roads and trails) is the only way to protect critical wetland and riparian areas, areas with fragile soils, and areas required by wildlife as undisturbed habitat.

2. If the resulting travel policy causes impacts to endangered species or water quality standard violations, the land management agency could be in violation of the Endangered Species Act, or the Clean Water Act, or both. Finally, we do not want this policy to set a precedent that would allow these non-system routes to become part of the system without site-specific analysis and planning.

3. The DEIS states "(p)roper design and location of travelways can significantly reduce the risk of flood flows, slope failures, sedimentation, and channel degradation"(p. 3-56). Conversely, unplanned, user-created trails would presumably not have the benefit of USFS expertise in design and siting, and therefore may suffer and cause significant and disproportionate impacts that normally would be avoided through site-specific travel planning. Additionally, unplanned travelways can directly impact wetlands, riparian areas, and rare plant species and can change wildlife usage patterns. Therefore, all non-system routes should be closed through this Decision, and nothing in this Plan should change a user-created, non-system trail into a "designated" or "system" trail unless site-specific information convinces the USFS that the trail is sited to avoid significant impacts as required by E.O. 11989 (described above).

4. Keeping non-system roads and trails open to OHV use under a limited travel policy also makes it difficult to define the terms "non-system road" and "non-system trail" so that users can be confident they are operating within the rules. The final decision must therefore clearly define when a trail is officially considered a trail. For example, if 10 mountain bikes have ridden across a previously un-tracked wet meadow leaving clear tracks and vegetation disturbance prior to the issuance of this proposed limited travel policy, a trail user be should able to distinguish whether the route is considered a non-system trail.

5. Further, this OHV policy must not allow or promote "trail creep" in which a system or non-system trail created by non-motorized users or smaller OHVs gradually opens to travel by larger 4-wheel OHVs. In order to prevent trail creep on non-system routes, the *type* of trail use (non-motorized, motorcycle, all-terrain vehicle (ATV), etc.) must be limited to existing use, and the existing use must be readily identifiable to trail users. Non-system routes should be mapped, marked, and designated as to level of use. Again, mapping and designating use on non-system trails should be used to prevent a precedent of allowing non-system routes to be added to the system.

6. Approximately 70% of the current transportation system on the Forest has not been

maintained to the full standard (p. 3-58) and this does not include the vast network of user-created, non-system trails which are most likely maintained below full standard.

7. The FEIS should clearly identify or estimate the miles of unplanned, user-created roads and trails, and specify where these travelways are prevalent. Without such an estimate, it will be difficult to disclose the impacts of these travelways or know whether management practices will protect ecosystem functions.

8. The DEIS describes how motorized or mechanized travel will affect soils, stating that such use "can seriously degrade soils over larger areas" (p. 3-31). However, the effects of off-road, off-trail travel on wildlife (p. 3-211), grassland, riparian, and wetland habitats (p.3-181), or aquatic resources (p. 3-56) are not disclosed in this DEIS. Disclosure of impacts to these resources should be included in the FEIS.

9. There are areas in the Rifle and Blanco Ranger Districts that are currently open to off-road travel where the natural factors in the watershed assessment in the DEIS indicate "high risk." These high-risk, off-road areas (as well as the "moderate risk" areas) should be carefully evaluated for compliance with E.O. 11644, and if the final decision includes areas of off-road travel, any uses must comply with E.O. 11644.

10. To protect remaining ecosystem function, the USFS should consider closing ATV-based grazing management in wildlife core and corridor areas.

C. **Winter Travel Management: Snowmobiles**

1. It is difficult for the user to distinguish wilderness or closed area boundaries where no obvious geographic feature marks the boundary. In wilderness or other areas with motorized closures, users should be protected against inadvertently entering wilderness or closed areas. Ecological and wilderness values could be protected by designating the management areas adjacent to wilderness or motorized closures with Winter Travel Strategy "A": Motorized Travel Restricted to Designated Routes.

2. In snowmobile (and ATV) 2-stroke engines the lubricating oil is mixed with the fuel and both are expelled as part of the exhaust. These engines allow up to one third of the fuel delivered to the engine to be passed through the engine and into the environment virtually un-burned. There are numerous studies underway to determine what effect these pollutants may have in the environment. EPA recommends the USFS monitor the results of these studies and factor the results in to travel management and resource planning.

3. Although WRNF policy does not allow snowmobiles off-trail until at least 6 inches of snow has accumulated, this requirement may not be sufficient to protect tundra vegetation. Snow in alpine areas is highly susceptible to wind movement which can leave bare or thinly

covered areas that would be difficult or impossible to avoid given the speed of snowmobiles. Again, given the irreversible nature of impacts to tundra vegetation outlined above, according to E.O. 11644, the Forest Service must monitor for impacts to tundra vegetation resulting from snowmobile use, and restrict snowmobiles wherever such impacts are discovered.

III. Recreation

As stated in the DEIS (p. 1-5), "The challenge facing the White River NF is to optimize the recreation experience while balancing it with the need to protect wildlife and other environmental values." The DEIS indicates that, under *any* of the alternatives, recreational use is expected to increase in virtually all categories of use on the Forest. Even in the alternatives that reduce the number of trails through sensitive areas, the amount of hiking, OHV, recreational driving and mountain biking is still forecasted to increase. The public and decision-makers should be made aware that even under alternatives D and I, the Forest is proposing to maintain the high quality of diverse recreation opportunities while reducing some of the negative environmental and wildlife effects associated with the 1984 Forest Plan.

A. Ski-Based Resorts

1. The importance of giving careful consideration toward expansion of ski area and aerial transport corridors (management area prescriptions 8.25 and 8.31, respectively) cannot be overstated. While ski areas occupy only 3% of the land on the WRNF, the DEIS (p. 3-209) indicates that "(s)ki-based resorts that convert habitat types within ski area boundaries often affect the mix of habitats in much larger landscapes well beyond special-use permit boundaries. For this reason, expansion of existing ski areas must be evaluated in light of their much broader influence outside permit boundaries." Also, no other land management prescription on the Forest directly results in more stream-water depletion, wetland impacts, air pollution, permanent vegetation change, or permanent habitat loss. In the last planning cycle, more wetland impacts and stream depletions resulted from ski area expansion and improvement than from all other Forest management activities combined, including many direct and indirect impacts that are permanent (irreversible and irretrievable).

   Given that the development of both ski areas and aerial transport corridors result in irreversible and irretrievable impacts to the environment, the Forest Plan decision maker would benefit from additional analysis of potential impacts on the natural resources that occur on, or utilize, the areas proposed for 8.25 management area expansion. Once the USFS designates a new area to the 8.25 or 8.31 prescriptions, the agency basically recognizes that some portion of that landscape could incur irreversible impacts in the future. We recommend that the USFS, prior to deciding to expand an 8.25 or 8.31 management prescription, specifically solicit input from its own natural resource professionals, from Colorado Division of Wildlife (CDOW), United States Fish and Wildlife Service (USFWS), Army Corps of Engineers (ACOE), and local resource professionals regarding

any known natural resources that should be preserved from eventual development of an expanded 8.25 or 8.31 prescription.

The resources of concern in management area 8.25 include resources that are difficult, if not impossible, to mitigate (i.e., old growth forests, slope and fen-type wetlands, critical wildlife habitat, tundra, etc.). A more thorough resource analysis at this planning level could save USFS personnel and federal and state budget resources in future site-specific analyses. It is necessary to protect critical resources through the Forest Plan because mitigation opportunities may be limited or unavailable in site-specific NEPA assessments.

2. **Conflicts in disclosure of environmental impacts:** The EPA is extremely concerned with how the presentation of the Ski-Based Resorts Section (Topic 3, Part 2) in the DEIS does not identify full impacts or provide objective analysis conclusions. This section is written with a clear bias against Alternatives D and I, which limit expansion opportunities to current permit boundaries, and in favor of Alternatives B (no-action), E and F, which allow significantly greater expansion opportunities. It is the intent of NEPA that each alternative receive fair and equal treatment in the analysis (see 40 CFR 1502.14 and Question 5b in CEQ's "40 Most Asked Questions" in Federal Register Vol. 46, No. 55). Our primary concern is that the USFS will now receive public comments on the ski area portion of this DEIS which are based on non-objective, misrepresented or conflicting information with respect to ski resorts. It is unclear how the USFS will be able to adequately analyze comments that may be based on poorly supported information.

   With respect to Alternatives D and I (least ski expansion), the Ski-Based Resorts analysis in the DEIS makes the following mis-statements:

   - With Alternatives D and I "urbanization of adjacent private lands will be accelerated" (p. 3-347) compared to Alternatives C, E and F. In contrast, the Air Resources analysis states, "Increases in skiing capacity...attract more visitors as well as employees, stimulating development of adjacent lands" (p. 3-73),

   - Alternatives D and I will result in "more fragmentation of the vegetation mosaic" (p.3-348). In contrast, the Biodiversity analysis indicates "the higher the acreage of (ski-area) allocation, the more potential for fragmentation or perforation" (p. 3-20),

   - Alternatives D and I will result in "higher impacts to wildlife" than Alternatives B, E and F (p. 3-348). *In contrast,* the Wildlife section states the level of effect to wildlife is greatest in B, followed by E, F, C, I and D (p.3-210),

   - With Alternatives D and I, air pollution related to ground-based transportation will be more evident than in B, E or F (p. 3-350). *In contrast,* the Air Resources analysis

states that "the impacts of ski-based resorts are primarily driven by traffic volumes and population" and that "Alternatives B and E have the greatest potential to adversely effect air quality because they provide the highest amount of skiing" (p. 3-73),

- Alternatives D and I "do not allow any expansion of existing ski-based resorts" *(Mentioned 4 times. With Alternatives D and I, there is available expansion*

  capability within many of the permit boundaries, including Vail, Copper Mountain, Keystone, and Snowmass)

- Alternatives D and I will restrict human use of the Forest and limit the number of recreation opportunities *(all alternatives restrict human use of the Forest and limit the number of opportunities, but Alternatives D and I were the only alternative targeted with this statement)*

- Alternatives D and I will result in the highest number of lands affected by back-country skiers and their associated management problems like search and rescue *(This comment is unsubstantiated, back-country skiing has increased tremendously on the Forest, even while ski-area skier density has rapidly decreased)*.

With respect to Alternatives E and F (highest ski expansion alternatives), the DEIS makes the following mis-statements saying these alternatives will:

- result in "retention of more trees, would also have lower visual impacts, and be more compatible with soil, water, and wildlife resources" than Alternative D or I (ps. 3-349). The Visual Resources section (p. 3-375) indicates that B, E, F and C would have more visual impacts.

- have the fewest negative impacts on air quality (p. 3-350)

- recognize recreation and tourism as important regional and community values *(implies other alternatives dismiss these values)*

3. While the resource sections of the DEIS indicate correctly that Alternatives E and F would have dramatically more impact to natural resources from ski-based resorts (8.25) and aerial transport corridors (8.31), this information is neither mentioned or referenced in the ski area and ATC sections. The Ski-Based Resort and Aerial Transport Corridor (ATC) sections of the document could be improved in the FEIS by implementing the following:

   - eliminate all discussion of the environmental effects of the various alternatives from these sections, keeping these sections focused strictly on the recreation effects of

the alternatives.

- within these two sections, provide the reader with (and highlight) pointers to the specific natural resource sections of the document (with page numbers) that discuss the environmental effects from ski resorts and ATCs including: watersheds, aquatic resources, wildlife, wildlife habitat, air resources, soils, forested vegetation, non-forested vegetation, and any of the applicable appendices.

4. Conflicts between proposed prescriptions and past Forest decisions and agreements: The following prescriptions should be removed from all alternatives in the FEIS because they conflict with past WRNF decisions and agreements:

   - The DEIS includes proposals for an ATC (Stone Creek) and a management area expansion (Meadow Mountain) through elk mitigation areas established in the Decision that allowed development of Beaver Creek Resort.

   - The proposed ATC corridor east of Vail (Timber Creek and Lime Creek Drainages) appears to be in conflict with the USFWS Conference Opinion on Vail's Category III Decision.

   - We also note proposed 8.25 ski expansions or 8.31 aerial transport corridors into areas identified in USFS documents (see Wildlife comments below) as critical wildlife corridor habitat. Two such examples are the corridor between Keystone and Arapahoe Basin, and the corridor above and to the north of Breckenridge on the eastern aspect of the Ten Mile Range.

   - The decision on Vail's Category III expansion also included an agreement with the USFWS that stated,"Because of the value of Commando Bowl to lynx, VA will neither conduct nor promote any operations or activity in Commando Bowl, including avalanche control." The USFS should explain in the FEIS why Vail's management area boundary was left in tact in all alternatives proposed in this DEIS.

5. **Skier density should be disclosed and the USFS statistics for determining expansion needs should be revised:** In the10-year period from 1987 to 1996, the USFS-approved skier density decreased by 32%, a figure that would be substantially higher (~37%) with inclusion of Vail Ski Area Cat III and Breckenridge Ski Area Peak 7. In 1987, WRNF had 8.03 skiers (SAOT) per skiable acre. In 1996, prior to Cat III and Peak 7 approvals, WRNF had 5.5 skiers per skiable acre. This decrease in skier density over time is not directly disclosed anywhere in the document and should be included in the FEIS. With this information, the public would be provided the opportunity to comment on the acceptability of the rapid increase in the amount of land allocated per skier on the WRNF.

It is important that the public fully understand the process the USFS utilizes to assess the need for considering ski expansion proposals. Further, the DEIS indicates that "traditionally, the Forest assumed that resorts with high annual use in relation to capacity had the highest justification for increasing skier capacity." When resorts have annual utilization exceeding 50% they are considered to be operating at or above capacity and have justification to consider expansion. Several key variables are used in the calculation of "annual utilization" including "annual skier days" and "daily skiers at one time" (SAOT). EPA believes that both of these key statistics are being misapplied in the determination of whether expansion is needed.

6. Regarding "annual skier days," from 1987 through 1996 the DEIS indicates that annual skier days increased 24% (Table 3-84). The FEIS should indicate that some portion of that growth was due to increased early ski season utilization resulting from snowmaking and, if possible, should estimate the number of skier days attributable to snowmaking. It is important to differentiate the portion of growth attributable to snowmaking because it has no bearing on whether there is demand for more terrain for skiing. Early season skiing is, even with snowmaking, the least visited portion of the season at WRNF resorts and even with snowmaking, resorts operate at well below capacity during that period. We recommend that the Forest disclose how much skier days are expected to increase in the early season (opening day through November 15) for the planning period.

7. SAOT is a complex statistic that includes: acres of skiable terrain, lift capacity, desired lift line length, and desired skier density. The DEIS indicates that "daily skiing capacities are determined by the WRNF." (p. 3-309) In fact, two of the important variables in the calculation, skier density and lift line length, are determined by each individual resort, not by the WRNF. As expected, these two variables have decreased dramatically over time, meaning that today the Forest Service may be using an inaccurate number to justify expansion with far less density than in the past.

   Here is an example that demonstrates why this is a problem: Prior to the Category III expansion at Vail, the annual utilization rate was 52% and the SAOT was 19,900. Because utilization exceeded 50%, the area was considered highly utilized and a good candidate for expansion. Category III then added approximately 800 acres of skiable terrain, an area bigger than Aspen Mountain, yet the USFS agreed not to increase the SAOT which remains at 19,900. Therefore, even if the area does not attract a single new skier with the Category III expansion (highly unlikely) the utilization rate would remain at 52% making Vail still appear to be highly utilized despite a 20% increase in skiable terrain, and a 17% increase in managed skier density (SAOT/skiable acres). Now, despite having possibly the lowest skier density of any major ski destination resort in Colorado, Vail would meet USFS's criteria as a good candidate for expansion.

EPA recommends that the USFS use a more accurate way to calculate annual utilization for planning purposes such as the Forest Plan and revise all Tables, analysis and conclusions accordingly. Of course, ski areas would be able to use whatever statistical calculations they want for their internal purposes. We recommend the following changes be made in the calculation of annual utilization for public planning purposes:

- The SAOT calculation should be made using a consistent formula across all resorts.

- This formula should be disclosed in detail in the Forest Plan and all site-specific documents.
- This Forest Plan should include "safety-based" skier density Standards across all ski areas on National Forest in the calculation of SAOT.
- The Forest Plan should include a management goal for a reasonable lift-line length.
- The 60% multiplier utilized in the Annual Utilization formula should be revised to reflect changes in use patterns due to snowmaking and increased weekday visitation which bring more visitors at low density times.

8. **Comments on Figures and Tables**

a. The USFS should review the daily SAOT's listed in both Table 3-85 and 3-86. The SAOT of 19,185 listed for Vail is actually a "comfortable carrying capacity" and the approved SAOT is 19,900. This makes it look like Vail's annual utilization is higher than it really is. Please review and correct any other inaccuracies that may appear in the SAOT columns.

b. The Permitted Acres listed in Table 3-86 includes private property in the "1987" column, but do not include private property in the "1996" column. Both columns should use the same statistic.

c. Figure 3-22 projects that skier recreation visitor days (RVDs) will double by 2010 and will almost triple by 2020. On which alternative are these projections based? This is inconsistent with other analyses in the document. Figure 3-22 projects that skier recreation visitor days will double by 2010 and will almost triple by 2020. This data is questionable given past trends, and given other analysis presented in the Ski-Based Resort section which projects only a 1-2% increase per year in skier days. Many of the projections in this table appear to over-estimate recreation trends compared to recent actual trends.

9. **Miscellaneous Ski Area Comments**

a. This section of the DEIS argues broadly that areal expansions are needed to accommodate different types of users (p. 3-331) but does not mention the possibility of redesigning existing areas to accommodate changes in user patterns. For example, most resorts have added terrain parks within existing runs to accommodate a shift in use from skiing to snowboarding, and glade skiers could be accommodated by planting trees in existing runs instead of always expanding into previously undeveloped terrain. The DEIS states, "only by having adequate terrain available to all users can ski-based resorts cater to...groups with unique needs." In fact, most, if not all resorts on the Forest already effectively accommodate all the user-groups listed. The document should not imply that each user group needs its own separate terrain when, in most cases, they are presently enjoying the same terrain with minimum conflict.

b. The Forest Plan standards applying to ski areas should identify the public purpose for the use of snowmaking on NFS lands. These standards should include the planned-for opening date in an average water year (ex: Nov. 20), and should specify that compliance with all other standards and guidelines will be met with all new snowmaking projects.

B. Aerial Transportation Corridors (ATCs)

1. The ATC section suggests benefits to air quality but fails to mention any environmental impacts. The Air Resource section of the document comes to the opposite conclusion, and EPA agrees, that in most cases, air resource impacts would increase if ATCs are built. While it is possible that pollutant concentrations could be reduced in some areas, it is often simply shifted to other areas, and to the extent that ATCs will induce increased utilization at the resorts, more visitors may mean more local transportation , including more cars which means more air pollution. These shifted impacts should be analyzed and disclosed in the FEIS.

2. The DEIS states "The use of gondolas and trams may have less effect on big game species than do traditional roadway systems where collisions are a growing problem." This statement is inaccurate, since none of the 8.31 corridors proposed in the document would replace a roadway system. The Wildlife section of the document indicates that 8.31 gondola corridors could have major impact to big game and other species. At best, it may be true that there are more car/wildlife collisions than there are gondola/wildlife collisions.

3. The ATC section suggests some environmental benefits of the 8.31 designations, but in almost all cases, EPA would argue that the potential environmental impacts of that designation would far outweigh the potential benefit, an argument supported by the Resource sections of the DEIS. The DEIS did not present sufficient detail, and in some cases failed to mention the following foreseeable impacts from 8.31 gondola corridors:

- All ATCs will require large parking lot construction, much of which could be in or adjacent to wetland or riparian areas.
- ATCs could result in clearing forested wetlands, habitat fragmentation, and wildlife corridor impacts.
- Many ATCs will induce residential and retail development, often with impact to wetland and riparian areas, and likely increase demand for land exchanges. These potential "indirect" effects, while not directly in the USFS's control, will be caused by ski area expansion and must be disclosed in this document (40 CFR 1508.8).
- ATCs will dramatically increase the geographic scope of ski area impacts.

4. **Potential Conversion of 8.31 or 8.21 to 8.25:** When discussing potential aerial transport corridors, the DEIS states, "(s)ome of these corridors could be managed either as management areas 8.25 or 8.31" (pp. 3-312 and 3-328). If this is indeed the case, the FEIS must specify the ATCs in which this provision would apply. Currently, the public perception is that 8.31 corridors would not function as ski runs, or as extensions of the ski area. To that end, EPA recommends that an additional standard be included to the 8.31 prescription that bans recreational use of the corridor. Without such a standard, there would be little or no difference between the scope or expected impacts from 8.31 or 8.25, and therefore no reason to differentiate between the two. Without this added standard, these ATCs should be considered extensions of the ski area designation (i.e., 8.25).

   The Plan would benefit from providing some additional clarification of distinctions between the 8.21 (developed recreation site) and 8.25 (ski-based resort) Management Area designations, which seem very similar. Both offer "developed" recreation facilities that can support winter recreation. Both offer vegetation modifications to support recreation opportunities. It could therefore be interpreted that both 8.21 and 8.25 would allow clearing of ski runs and installation of lifts to transport recreationists. The USFS must add clarification to the description of 8.21 that conclusively differentiates it from 8.25.

IV Timber and Prescribed Fire

1. The FEIS should separate out categories 4C ands 5 in Table 3-17 to provide a clearer picture of old growth on the WRNF.

2. Alternative D appeared to be the only alternative to feature prescribed fire as a tool in lodgepole and aspen stands to meet habitat needs for lynx. The FEIS preferred alternative should encourage the use of this tool as it is more effective than cutting (according to USFWS) in providing for lynx habitat.

3. Alternative D also maintains the largest "patch size" which is critical to maintaining habitat function. EPA recommends that the FEIS preferred alternative maintain the patch size of at

least 1250 acres as featured in Alternative D.

4. EPA does not agree that "(e)ffects to late-successional forested stands from skiing development are less when development occurs above tree line; in non-forested areas, including many back bowls and avalanche paths; and between rock outcroppings." (DEIS, p. 3-107) Effects in areas above tree line should not be measured in terms of standard forest metrics (fragmentation, age stratification, etc.) because these areas are not historically forested. Instead they should be measured in terms of biodiversity and modification of drainage patterns (i.e. water quality problems).

V Abandoned Mines

1. There is a brief discussion of stream impacts from active and inactive mining in the upper Colorado River on page 3-41. It should clarify how much of the impact is coming from Forest Service sites and a description of the sites.

2. The Forest should be commended for including a list of abandoned mines "on or adjacent to" the Forest that have been rated according to the degree of environmental degradation and physical hazards (pages J-13 and 14 of the DEIS). However, as requested in our scoping letter, the Forest Plan should identify "mining sites that the Forest wants to treat during the life of the Forest Plan (such as under CERCLA §106 or nonpoint source pollution control), the proposed implementation schedule, and a framework for working on mine sites with mixed ownerships." (page 3)

VI Aquatic Resources

1. The "Legal and administrative framework" for aquatic resources on page 3-223, should include the CWA and applicable provisions.

2. The discussion of aquatic resource and the affected environment should provide reference to more information on aquatic/water quality conditions and trends, including not only the streams identified by the State as impaired, but any other streams identified by the Forest as needing improvement (pages 3-222 through 226). A reference to Appendix J for the detailed State lists should also be provided in this Section.

3. With all the uses under Forest Service purview discussed in the DEIS, it is not clear why the Forest Service claims that "Most of the activities with the potential to negatively affect fisheries are beyond the scope of the Forest Plan and outside of Forest Service control." (page 3-231) Please provide clarification in the FEIS.

4. Effects on aquatic resources from ski-based resorts: The description of "(e)ffects on aquatic resources from ski-based resorts" should include a table identifying the amount of water each resort is currently permitted to use for snowmaking and projected uses. The table should also provide a reference year (perhaps 1984) to allow the public to understand the trend in snowmaking over the planning period.

VII Watersheds

1. It is apparent from the discussion on page 3-44 and elsewhere that the Forest has substantial information on watershed conditions; however, in discussions of watershed conditions or the recent trends for individual units (such as the Blue River Unit on page 3-45), the information is not clear. In addition to the narratives discussions, the FEIS should include current status by watershed depicted on a map (preferably at the 11 digit HUC code level or below). This would be in addition to the maps provided in the DEIS on watershed risk.
2. Because much of the public is not familiar enough with individual streams on the 303(d) list to know where they are located, one of the watershed maps should include an overlay of streams on the State's CWA 303(d) list and other streams that the State and Forest Service have identified as needing improvement.

3. The FEIS should include a clearer definition of impaired streams under CWA, Section 303(d), and those listed under section 305(b) should be clarified. This is more difficult in Colorado since the State used the same lists, but the definitions should use EPA regulations, guidance and direction, and the State's temporary policy. Please contact Toney Ott of my staff for details (303) 312-6909.

4. Page 3-44 refers to Appendix J for a "complete explanation of the ... results" of the watershed condition assessment. Also, the discussion of cumulative effects on page 3-64 refers to Appendix J for an identification of watersheds having "higher natural and/or human caused risks of adverse impacts from management." We did not find the results of the watershed condition assessment or an identification of the high risk watersheds in Appendix J. These should be included in the FEIS.

5. The watershed risk assessment project should be identified as the Interwest Watershed Inventory (IWWI) in Appendix J. Additional information on individual watersheds should be made available for the FEIS and future NEPA documents. A clearer explanation of the data elements, especially those measured by professional judgement should be included.

6. Three of the five stream segments identified as "use impaired" by the State in the Eagle River Unit still need Total Maximum Daily Loads (TMDLs)(p. 3-46). The EIS should state which TMDLs have been completed and how Forest activities might impact them.

7. The first paragraph on page 3-36 indicates that watersheds can recover from negative impacts.

This maybe true for many episodic impacts but may not be true for more permanent impacts, such as road construction. The paragraph should be rephrased to identify types of impacts that watersheds can recover from in a reasonable time frame, and those impacts where recovery is not foreseeable.

8. Ground-water discussions indicate that typical forest management activities have a limited impact on ground water. To the contrary, increased surface runoff can impede ground-water recharge (by decreasing percolation to ground water) leading to reduced ground-water to surface-water discharges, which would be particularly harmful during low-flow periods. For a more informed decision, sections should include discussions of potential negative effects on ground-water quantity from applicable forest management techniques (p. 3-41 and p. 3-53).

9. The last paragraph of the section on page 3-65 indicates that cumulative impacts to aquatic and riparian resources can be addressed on USFS lands by applying applicable watershed conservation practices. This mistakenly implies that any activity on Forest land can be managed to prevent negative effects to water-related resources, but not all activities within a watershed can be modified to prevent impacts to aquatic systems. For example, mining activities that utilize valley areas for waste rock disposal, increased surface water runoff from developed areas, permanent loss of habitat from ski area development adjacent to streams, localized effects on vegetation communities from cattle grazing, etc. It is understood that best management practices (BMPs) can be implemented to minimize the effects of land use practices. However, certain thresholds in the type and quantity of management activities will lead to unacceptable individual and cumulative impacts. This section should be rephrased to indicate that cumulative impacts will occur, even with the implementation of BMPs (DEIS, p. 3-65).

10. Appendix J contains information on assessment of watershed conditions. On page J-5, a paragraph is included which describes human influence factors. It would be helpful to the reviewer if this section was expanded to include types of disturbances considered, location of disturbances, and management activities that allow for the disturbances. The health of the upland areas in a watershed is important to the overall health of the entire watershed. The assessment should include more information on upland disturbances from human activities and indicate how they are considered in determining watershed health (DEIS, p. J-5).

11. "Water quality" and "status of beneficial uses" should be included as key indicators (p. 3-36) in this section.

12. EPA supports development of "integrated soil-water-fish improvement schedules for watersheds" (Appendix B-13). However, these schedules should be part of the Forest Plan. The Plan should also recognize the need coordinate development of the improvement schedules with the Colorado Water Quality Control Division and Water Quality Control Commission for the streams on the CWA 303(d) list to have TMDLs (pages J-11 through 13 of the Draft EIS),

and the applicable Forest streams listed in the Colorado Unified Watershed Assessment.

VII Drinking Water

1. In the Legal and Administrative Framework section (p. 3-36), please include a reference to the Federal Multi-Agency Source Water Agreement, in which 13 Federal Agencies, including USDA, agreed to assist states and local entities, within the mission and resources of the agency, to complete local source water assessments and protection activities. (Available at: www.cleanwater.gov/swa/resource.html)

2. The Colorado Source Water Assessment and Protection Program was approved February 17, 2000. The Colorado Department of Public Health and Environment has 42 months to complete assessments for all public water systems in the State. Each assessment must include: 1) a delineation of the watershed (to the headwaters or state boundary) or ground water area contributing water to a public water system; 2) a potential contaminant source inventory for both point and non-point sources of pollutants regulated under the National Primary Drinking Water Regulations under the Safe Drinking Water Act; and 3) a determination of the susceptibility of the water system well of intake to identified contaminant sources. Information from the assessment is then provided to the public water system and the public.

3. Please identify the size (sixth-order?, 11 or 14 digit HUC?) of the watersheds listed in Table 3-3 and where specifically are they located (p. 3-39 and 3-40). Please include a map showing the locations of watersheds which supply water for municipal use. It would be most helpful to show these smaller watersheds, with locations of surface water intakes, within the fourth-code watersheds on the map on p. 3-38. Table 3-5 provides insufficient information to evaluate how critical these areas may be to the municipalities named.

4. Please also include an explanation of why these watersheds, which supply community drinking water, are not defined as public supply watersheds. While management of the forest in the past has not interfered with the ability of these watersheds to supply water for community drinking water supplies, care should be taken to continue to manage these watershed areas so that other uses, including economic and recreational uses, have no negative impacts in the future. Considering the increase in population in the State of Colorado in recent years, it is reasonable to expect that population will continue to increase. Demands for both water for municipal supply and for recreational opportunities within the Nation Forest can also be expected to increase. Both uses should be managed to minimize conflict and adverse impacts to water quality.

5. The State of Colorado Department of Public Health and Environment will undertake assessments of all watersheds that supply water to public water systems within the coming 42 months. If the identified watersheds, or portions thereof, in the White River National Forest are determined to be critical for protection of these public water supplies, changes to the definition

and management of the watershed should be considered and incorporated into the FEIS.

Please note that source water assessments will be performed for all sources used by public water systems, including evaluations of ground water. EPA recommends the USFS carefully manage activities near wells for campgrounds and administrative sites to minimize impacts to human health. Ensuring proper siting and maintenance of facilities for human and animal waste are especially important.

6. Note that while sediment is not a listed contaminant under the National Primary Drinking Water Regulations, turbidity is regulated to protect human health. Sediment impairment of surface waters can cause increased turbidity of raw water for municipal supplies, thereby increasing treatment costs for public water systems. High turbidity, especially when turbidity is highly variable, can decrease the effectiveness of surface water treatment, including disinfection to remove pathogens. Sediment can also cause blocking or silting-in of intake structures resulting in increased maintenance costs or capital costs to move an intake. This should be considered in the FEIS.

7. **Direct and Indirect Effects to Watersheds:** The DEIS states the potential for increased water yield and resulting channel degradation from timber harvest and prescribed burns (p. 3-53). Water yield changes leading to channel degradation in a small watershed used as a source for public drinking water can be catastrophic to the public water systems and their customers. Forest fires and timber harvest in such watersheds can lead to significantly increased sedimentation into the water source, causing unexpected and shifting changes in turbidity. This can represent a significant threat to public health and cause unexpected increases in operating costs for the public water system. The aftermath of forest fires can also cause taste-and-odor problems for affected systems, which the public tends to perceive as affecting the safety of their drinking water, even where no public health threat is indicated.

VIII Wetlands and Riparian Areas

1. The discussion on pages 3-43 and 44 gives only general information on riparian areas. However, it should also include information on existing conditions and trends.

2. From Table 3-22 on page 3-115, the condition of most of the riparian area is estimated. Thus, it is apparent that a relatively small percentage of potentially affected streams have been walked for riparian Proper Functioning Condition (PFC) determinations. As discussed earlier, the Forest Plan should include PFC determinations. The discussion of watershed conditions in Chapter 3 should also include information on riparian PFC for each unit and trends for the streams in the unit.

3. The DEIS describes riparian areas as being in "satisfactory" condition if they are just "moving

towards forest plan objectives".(Table 3-22) It would be more accurate to substitute the word "improving" for "satisfactory."

4. We applaud the Forest's efforts in assessing acres of riparian areas (including wetlands) using aerial photographic interpretation.(Table 3-4) However, we understand the limitations of mapping these ecosystems in areas with forested cover and believe that significant wetland issues arising during site-specific project review could be avoided if ground truthing was done especially in areas where intensive recreation management prescriptions (i.e., ski-based resorts and ATCs) are proposed. This additional detail would better direct management decisions based on the aquatic resources potentially affected and would give the permittees more information on which to base future project development decisions.

5. In addition, we are concerned that the management prescription for wetland/riparian areas in the old Forest Plan (i.e., 9A prescription) has been removed from this planning cycle. Despite the premise that the "new standards in the Forest Plan provide for almost absolute wetland protection on the forest..." (p.3-231), the lack of a special protection overlay or management prescription appears to lessen the protection afforded these special aquatic ecosystems. The new standards appear to rely heavily on the Clean Water Act (CWA) Section 404(b)(1) Guidelines which regulate activities involving only dredge and fill (and thereby requires a permit from the Corps of Engineers). Only the least damaging practicable alternative for the basic project purpose (i.e., proposed activity) is supposed to be permitted by the Corps and often results in some adverse impacts to wetlands. In addition, many activities on the Forest could result in indirect adverse impacts to wetlands and may not need a permit. Therefore, we recommend that the Forest Service should reconsider a management prescription for wetland/riparian areas to more closely follow the intent of the E.O. 11990 (to take action to minimize the destruction, loss or degradation of wetlands) and the CWA (to maintain and restore the physical, chemical, and biological integrity of the waters).

IX Wildlife and Biodiversity

General Comment: The importance of maintaining habitat connectivity and reducing fragmentation cannot be over-emphasized given increased recreation pressures on the Forest.

1. Direct and Indirect Effects of Connectivity / Concern Areas A-D:

   - The USFWS Conference Opinion on Vail's Cat III decision stated, "To avoid compromising the survival and recovery potential of lynx in the Southern Rockies ecosystem, the Service believes...a cohesive and functional connective corridor between the Eagles Nest and Holy Cross Wilderness complexes, through the Vail area, must be preserved. Loss or further impairment of this corridor risks splitting the Southern Rockies ecosystem into two disjunct segments, thereby threatening the continued long-term survival and recovery of lynx in the Southern Rockies, including its ecosystem. Given that these

recommendations were provided directly to WRNF, and given the recent listing of lynx, it is unclear why the DEIS does not designate this corridor as a "Concern Area" in the Wildlife section. (Page 3-196)

- The eastern aspect of the Tenmile Range was identified as an important corridor or concern area for lynx movements in 1) the Vail Ski Area Category III FEIS (USDA, 1997), 2) the Breckenridge Ski Resorts Peaks 7 and 9 Facilities Improvement Plan EA (USDA, 1998), and 3) the Upper Blue Stewardship Project EIS (USDA, 2000). It is unclear why the Ten Mile range is not designated a "Concern Area."

- USFS should consider extending Concern Area 'A' to the Continental divide to provide connectivity between the Ten Mile Range and the Divide crossing of I-70. According to USFWS, CDOW and USFS biologists and referenced in the DEIS for the Upper Blue Stewardship Project, a highly utilized and critical corridor still remains, allowing wildlife to cross Highway 9 on this corridor.

- Based on past comments from USFS, CDOW and USFWS biologists, the description of Concern Area 'C' may want to include emphasis on the importance of Georgia Pass to the function of the corridor.

2. The biodiversity topic begins with a discussion about how biodiversity is managed by use of the course filter and fine filter approaches. Other than comparing variability to the historic range of variability, an approach for measuring biodiversity is not apparent. Maintaining the various vegetative structures for habitat through a course filter approach is an important component of maintaining biodiversity and sustainable ecosystems. The statement on page 3-15 under the Course Filter introduction, "(t)he underlying concept is that a representative array of vegetation cover types will include the appropriate vegetation mosaics that will accommodate most species" implies that biodiversity levels will be achieved solely by using management of vegetative habitat. Habitat availability is a basic requirement in maintaining certain levels of biodiversity. However, even with adequate habitat, other factors that result from management options, such as availability of connecting corridors, core areas, human intrusions (off road travel, fishing pressure, trail development) water quality, noise, air quality, adjacent land use, etc., affect species competition, thereby influencing biodiversity. These types of influences on the quality of habitat should be evaluated and the resulting effects to biodiversity should be determined (p. 3-15).

3. EPA recommends the Biodiversity section of the FEIS include an assessment of the impacts to biodiversity from each alternative, as this critical analysis is so far missing from the document.

4. The discussion on the effects on the historic range of variability (HRV) from the impacts of ski-based resorts is limited to the removal of forested vegetation. The USFS should understand the

effects on HRV with the full range of impacts from the ski-based resorts and aerial transportation including wetlands, hydrology, aquatic resources, non-forested vegetation, wildlife, etc.. (p. 3-13) all of which are important components of biodiversity.

5. The wildlife section (Part 3, Section 6) describes how wildlife will be affected by implementation of the various alternatives. Management indicator species (MISs) and management indicator communities (MICs) are chosen to help identify these effects. However, MISs and MICs are limited in their ability to provide an adequate representation of biodiversity. Certain species and communities should be chosen to best identify the level or richness in biodiversity. Specific criteria that relate to understanding biodiversity should be developed and used in the selection of indicator species. Although this section refers to animal life forms, plant life forms may also be appropriate as indicator species if they can act as adequate measures of biodiversity (p.3-167).

6. On page 3-82, it is indicated that the predominant forest vegetation consists of spruce-fir and aspen. It is agreed that the presence of these species in the appropriate stages and distribution is important to sustainability of the natural ecosystem. It is also understood that these species are valued by human society. However, less abundant species may play an equally important role in maintaining biodiversity throughout the forest system. Although limited in distribution, these species may play a crucial role for the survivability of certain animal species and certain unique ecosystems. WRNF should consider broadening the species base on which it evaluates biodiversity (DEIS, p. 3-82).
7. The text in Fire Management, Part 3, Section 5 provides a description of various fire management requirements and how fire suppression plays a role in forest health and composition. It includes discussions on how timber harvest, recreation, and travel management effects fire management. The section should also include an evaluation of the effects of various fire management options on the environment, particularly biodiversity. The importance of understanding the effects of fire management on biodiversity is also implied on page 3-96 under General Effects: "In all alternatives, the majority of the Forest will continue to be influenced primarily by natural process and existing agency policies, including fire suppression." More information is needed about the effects on the environment from fire management before informed decisions can be made (DEIS, p. 3-153).

X <u>Noxious Weeds</u>

1. Existing forest management protocols do not adequately account for noxious weed management. Because the WRNF has insufficient resources available for monitoring noxious weeds, those activities that have the highest potential to introduce or spread noxious weeds should receive the bulk of the attention. Timber harvest, controlled burns, travelway construction, and ski resort expansion activities should all be monitored for noxious weed introduction because the land is modified into an earlier seral stage (promoting weed establishment), a corridor is established for spreading populations, and a mechanism for seed

transport is supplied. We recommend inclusion of a Guideline in the plan that these activities will not occur where lands in, or immediately adjacent to, the project are currently occupied by noxious weeds.

2. DEIS, Table 3-35 (p. 3-144) describes the species of noxious weeds that occur on the Forest and the approximate acres affected by these weeds. However, we found no map or discussion of even the general locations on the Forest that are currently affected. Without disclosure of the location of these plants, it is not possible for the public or other reviewing agencies to determine which alternative in the Forest Plan or in the Travel Management Plan would protect the Forest against further invasion.

XI Grazing

1. We could find no discussion of the effects of grazing on biodiversity or on wildlife. This analysis should be included in the wildlife section.

2. The document indicates that forests lands have evolved with grazing animals. However, there is no discussion about how the current grazing scheme relates to historic grazing. The grazing habits of livestock are different than the grazing habits of large herbivores. Also, given the existing populations of elk and deer, the addition of livestock to the Forest may have long-term detrimental effects on ecosystem health.

3. The Forest Service Region 2 and EPA Region 8 developed a draft document titled "Clean Water Act Requirements for Grazing Permit Renewals" (April 21, 1995) that we recommend be used in the process of re-analyzing grazing allotments.

XII Socioeconomics

1. Contrary to the dire forecasts presented in several news stories of the devastating economic impacts from the FS preferred alternative, the analysis in the DEIS projects that Alternative D would increase the number of jobs and the amount of labor income contributed by the Forest by 18% compared to 1997. In fact, the DEIS shows the WRNF's effect on local economies growing under *all* of the proposed alternatives. EPA's support for Alternative D is enhanced by the lack of overall negative economic impact communities around the Forest.

XIII Cumulative Impacts

1. The cumulative impact sections throughout the document generally fail to differentiate cumulative effects among alternatives. Though some alternatives would likely result in increased future direct and indirect effects to a particular resource, this information is generally not

provided in the cumulative effects discussions.

PART 2
PROPOSED REVISED LAND AND RESOURCE MANAGEMENT PLAN

I Preface

1. Monitoring and the evaluation of the impact of projects are essential. Adaptive management responses should also include the ability to change contracts and permits, if management practices and mitigation efforts are insufficient (P-7).

2. While there is a commitment by WRNF to review new Forest Service policies and regulations for necessary adjustments, there is not a similar commitment to take action when there are changes to the regulations of other agencies (P-9). The EPA has published draft revised regulations for several water quality programs (TMDL program, NPDES program and water quality standards program). These new regulations and the accompanying guidance documents could impact FS programs and responsibilities. For example, the timber exclusion may be eliminated for some FS activities.

3. EPA recognizes and appreciates the goals and objectives for aquatic and other ecosystems on pages 1-3 through 1-5. The goals and objectives are very helpful in addressing the request in our scoping letter of January 22, 1998, for desired conditions regarding "water and aquatic resources, including watershed condition and waterbody health per the physical, biological and chemical integrity goals of Clean Water Act (CWA) § 101(a); and riparian area health."

4. The Proposed Revised Plan has a variety of goals, objectives, standards, guidelines, management area direction, and monitoring plans. While we understand that at this level of planning, schedules would be difficult to keep, we still recommend that an Implementation section be added to the Plan in order to better inform the public of the likely actions on the Forest, and to help the Forest with resource allocation. Specific examples of types of information to include would be:

   - schedules for watershed planning and improvement to meet the Plan;
   - schedule for rehabilitating camping areas;
   - schedules for abandoned mine remediation;
   - miles of riparian proper functioning condition (PFC) determinations to be made each year;
   - a brief overview of the annual process for getting an adequate budget to implement the Plan;
   - schedule for reissuing grazing allotment permits;
   - schedule for making road improvements for CWA compliance;
   - schedule for road closures;
   - agency and public outreach activities, such as site reviews for federal consistency coordination with the Colorado Nonpoint Source Management Program under CWA section 319;

- schedule for reporting to the State and other agencies under the CWA (e.g., sections 305(b) and 319);
- coordination with the State on the TMDL development process;
- schedule for remediating hazardous substance sites;
- schedule for major special use permit renewals, such as roads, dams, and ski areas; and
- compliance inspection plans for mitigation measures in special use permits and other forest activities.

II Goals and Objectives (Chapter One):

1. EPA strongly supports Goal 1.10 "Water Quantity." Providing instream flows and/or bypass flows is a critical function of the USFS to protect some key components of aquatic systems. Given increasing populations, there is real potential for stream flows to take an even bigger hit over this planning period. Fishing is a popular summer recreation pursuit on most of the Forest and contributes to the economies of the surrounding communities in many ways. Instream flows will help to protect the fisheries and aquatic resources on which both anglers and communities depend. Regarding the related Objective 1.10, EPA feels strongly that *every* special-use authorization should include sufficient bypass flow to meet Goal 1.10 and all the Standards and Guidelines in the Plan and in the WCPs. The statement "protect 10% of all perennial streams" can be interpreted in several ways, none of which would appear to comply with proposed standards for aquatic resource protection.

2. The goal and objectives for aquatic resources provide for "robust health of soils, streams, riparian areas, lakes and wetlands", a 25% reduction in the cumulative inventory of degraded water bodies", and that "3% of 6th-level watersheds will improve from Class II to Class I or from Class III to Class II" (pages 1-3 and 1-4). The objective of achieving a "25% reduction in the cumulative inventory of degraded waterbodies" seems reasonable given the long time it often takes for restoration. Please provide clarification on what the Forest Service watershed classification system means, if anything, in terms of meeting the CWA (e.g., the integrity goals in 101(a) and water quality standards).

3. The Forest Service has a goal of conserving "habitat capable of supporting viable populations of existing native and desired non-native species" (page 1-5). It is not clear on how the "viable populations" goal is consistent with the CWA and the goal to provide for "robust health".

4. The objective for conserving rangeland ecosystems is "By the end of the plan period, 80% to 90% of all rangelands will have plant communities and soils surface characteristics that are typical of the land type associations where they occur" (page 1-4). This is unclear in describing the quality of the rangeland resource that is needed for protection of watershed health.

5. Regarding remediation of hazardous substances sites in Objective 1.9 on page 1-5, it is not clear why "multi-jurisdictional funding" is needed to remediate sites on Forest Service land.

Likewise, in the same objective, there should be a reference to a definition of what the "environmental degradation rating of 1, 2, or 3" refers to, and a listing of the sites (probably in a Plan or DEIS appendix).

6. Objective 2-10c calls for cooperating with the Colorado Division of Wildlife on achieving desired fish populations (page 1-9). The linkage of these desired fish populations to the aquatic life designated uses set by the Colorado Water Quality Control Commission in the water quality standards should be clarified to assure consistency.

III Standards and Guidelines (Chapter Two):

1. The goal and objectives discussed above are supported by specific aquatic standards on pages 2-5 and 6. While the standards appear sound, they lack the specific criteria that will be used to document "robust health" and compliance with the CWA, and to document that "degraded water bodies" have been restored. One such criterion could be the standard to "Maintain a minimum of 70% of potential aquatic habitat capability for streams capable of supporting a self-sustaining fishery" (page 2-5). It is not clear that 70% of habitat capability equates to "robust health" and CWA compliance (e.g., the integrity goals and water quality standards). The definition of "robust stream health" in standard 7 should be defined, even though it is a reference to the Watershed Conservation Practices Handbook.

2. The Forest Service should be commended for recognizing the importance of in-stream flows (standard 9 on page 2-5). EPA supports the USFS's continued use of instream flows as among the only available tools for protecting and improving the function of depleted and threatened aquatic systems on the WRNF and across EPA's Region 8 states. See last comment regarding consistency with CWA, because it is not always the case that "existing stream health" equates to "robust health."

3. EPA has several concerns on the standards for riparian areas in the range section on page 2-12, and in the wildlife section on page 2-18. First, it is not clear that the vegetation residue and grazing management standards on 2-12 equate to the wildlife standard on page 2-18 to manage vegetative cover "at mid-to-late seral conditions to provide wildlife travel corridors along a minimum of 80% of the length of riparian zones within the project area." Secondly, it is not clear that the proposed standard of allowing a disturbance of up to 25% of the stream bank of the "key stream reach" before removing grazing (page 2-12) will achieve/maintain CWA compliance as discussed above. Please consider reevaluating the following (with the help of the Riparian Service Team of which USFS is a member) to assure that 1) that the riparian vegetation residue guidelines in the Plan are sufficient to protect/and improve, where needed, riparian functions and values; and 2) that "spring grazing" and grazing "spring-use riparian pastures" are acceptable considering the most recent research (page 2-12).

4. Per EPA's scoping letter, the Plan should address the "limitations on extent of disturbed areas

in order to maintain proper watershed hydrologic functions" (page 1).

5. As requested in EPA's scoping letter, there should be a description of "how these S&Gs will be addressed during the process of implementing/enforcing special use permits for road right-of-way easements, such as for Federal Highway Administration, State, and county roads" (page 2).

6. Because a waterbody that is not supporting its designated uses or criteria does not have additional capacity, we suggest the following standard be added to the Plan: "If waters are not fully supporting designated uses and criteria, uses will be restored and criteria met before any further impacts from USFS actions are considered."

7. The Plan should include a standard that specifically addresses the need to provide buffers for aquatic, wetland and riparian systems from disturbing activities such as timber cutting, recreation, road development (except crossings), mining activities etc. (see WCP Handbook). Without specific direction it is not clear how this protective limitation will be included in contracts and permits.

8. In the Water and Aquatic Resources (p. 2-5) standards and guides, Standard 6 should specifically specify that movement both UP and down stream will be considered in all designs and crossings. This should be done both to protect sensitive species and allow movement when appropriate.

IV Management Area Direction (Chapter Three)

1. Riparian and aquatic ecosystems in developed recreation "complexes" would be managed to "prevent unacceptable resource damage" (page 3-74). However, it is not clear what "unacceptable" means in terms of the goals/objectives/standards established earlier in the Plan, and in terms of meeting the CWA.

V Monitoring and Evaluation (Chapter Four)

1. Aquatic monitoring is included in Table 4-2 (page 4-5) to support the aquatic goals and objectives. This monitoring includes measuring improvement of streams that the State has designated as impaired (assumed to be the CWA 303(d) list) under Objective 1.4b. However, the monitoring should also measure improvement of degraded streams that are not necessarily on the State's list (i.e., the "cumulative inventory of degraded water bodies" stated in Objective 1.4(b) on page 1-4).

2. Chapter 4 contains water and watershed monitoring activities and there are plans to have an annual "monitoring evaluation report" (page 4-1) for the public. Please also include in the FEIS

the WRNF's reporting requirements under CWA §303(d), 305(b) (the State's biennial water quality report to Congress), and 319 (nonpoint source control program). This should include provisions for reporting by stream health class (WCP Handbook page 7 and associated references).

3. The Monitoring section should clarify the commitments for monitoring the effects of authorized uses of the Forest regarding protection of water quality standards and stream health/integrity. This should include the plans for determining whether the best management practices (BMPs) and mitigation stipulated for various uses/special use permits were actually installed, effective, and maintained/modified when needed. Likewise, the commitments for enforcing the stipulations for BMPs and mitigation should be described (refer to page 2 of our scoping letter). One indication of this need is the recognition of "failed implementation or effectiveness of mitigation measures for ditch diversions, roads, drainage control structures at ski areas, livestock grazing, and dispersed recreation use" (DEIS page 3-42).

4. As per EPA's scoping letter, we recommend a table be used to indicate the monitoring tools that the Forest will use for each major monitoring activity. As far as we can tell, the Forest Plan is the only NEPA document in which the USFS can get public input on monitoring tools and techniques.

5. There is a reference to regulatory requirements for monitoring compliance with the standards and guidelines (page 4-2), a statement that the monitoring process in Chapter 4 will result in an evaluation of "implementation of forest plans standards and guidelines" (page 4-9). However, the actual plans for monitoring compliance with the standards and guidelines remain unstated in the Plan (requested on page 2 of our scoping letter).

6. Please indicate whether habitat management in the Plan will meet Colorado Division of Wildlife fish and wildlife populations objectives (Objective 2.10c, page 4-7). The linkage should be made from these fishery objectives (including the goal to have "viable" populations of fish) to the CWA goals and State water quality standards for aquatic life to assure consistency.

7. The aggressive approach of Alternative D to habitat, and an active management style does suggest that a more aggressive monitoring program of the responses to activities should be implemented. Evaluation and adaptive management techniques should be equally as aggressive. Other alternatives (B, C, E) that have more potential for impacts should be monitored and evaluated at an even higher level of intensity. Any sign of degradation should lead the forest to re-evaluate the direction of their management.